CLAIMS

1. A method for compensating the impact of at least one defective pixel with a known position in at least one spatial light modulator (SLM) when creating a pattern of said at least one SLM on a work piece covered at least partly with a layer sensitive to electromagnetic radiation, comprising the actions of:
   - projecting an image of said at least one SLM on a detector arrangement to measure a dose of radiation; and
   - performing a compensation of said defective pixel by at least one of the most adjacent pixels in said at least one SLM.

2. The method according to claim 1, wherein said compensation is performed by assigning each of said at least one of the most adjacent pixels by a value given by subtraction of an intended pixel value by a actual pixel value, divided by the number of most adjacent pixels used for compensation.

3. A method for compensating the impact of at least one defective pixel in at least one spatial light modulator (SLM) having a plurality of modulating elements (pixels) when creating a pattern of said at least one SLM on a work piece covered at least partly with a layer sensitive to electromagnetic radiation, comprising the actions of:
   - illuminating by a radiation source said at least one SLM;
   - identifying a position of the defective pixel; and
   - performing a compensation of said defective pixel by at least one of the most adjacent pixels in said at least one SLM.

4. The method according to claim 3, wherein said compensation is performed by assigning each of said at least one of the most adjacent pixels by a value given by subtraction of an intended pixel value by a actual pixel value, divided by the number of most adjacent pixels used for compensation.

5. The method according to claim 3, further including projecting an image of said at least one SLM on a detector arrangement to measure a dose of radiation from the defective pixel.

6. The method according to claim 3, wherein identifying the position of the defective pixel includes projecting an image of said at least one SLM on a detector arrangement to measure a dose of radiation.

7. The method according to claim 3, wherein identifying the position of the defective pixel includes mapping the at least one SLM to a detector arrangement and then projecting an image of said at least one SLM on the detector arrangement to measure a dose of radiation.

8. The method according to claim 3, wherein identifying the position of the defective pixel includes:
   - mapping the at least one SLM to a detector arrangement by repeatedly projecting clusters of pixels onto the detector arrangement; and
   - projecting an image from said at least one SLM onto the detector arrangement to measure a dose of radiation, using the mapping.

9. The method according to claim 8, wherein the detector arrangement does not optically resolve a projected image of a single pixel.